

USAWC STRATEGY RESEARCH PROJECT

ARMY TRANSFORMATION – THE  
UNHINGING OF TITLE 10 LOGISTICS SUPPORT

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## ABSTRACT

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The need to resolve the emerging contradictions of statutory Service responsibilities mandated under Title 10 of the United States Code and the Department of Defense transformation strategy cannot be ignored. There exist a number of challenges to how Service-specific, in particular the US Army, transformation strategies are inadvertently impacting on theater level operational logistics. One of the most compelling features of transformation is the evolving concept for operational logistical support – a concept not well understood that may fall well short of expectations. Successful expeditionary operations will require a much better understanding of the Department of Defense and US Army transformation strategies and how those proposed changes will impact the joint community.



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## ARMY TRANSFORMATION – THE UNHINGING OF TITLE 10 LOGISTICS SUPPORT

America's ability to be surprised by the actions of its enemies is the result of a 'poverty of expectations.' There is a tendency in our planning to confuse the unfamiliar with the improbable. The contingency we have not considered seriously looks strange....

- Pearl Harbor: Warning and Decision

The US Armed Forces are seized with the idea of transforming. A serious undertaking considering that the Department is already struggling to balance the competing demands of on-going combat operations with maintaining existing weapon systems.<sup>1</sup> Whether it is Joint Vision 2020, the 2001 Quadrennial Defense Review, the 2004 National Military Strategy (NMS), or one of the many Service-specific programs, everyone seems to want to know what the future will bring and how best to prepare for it. The US military, and in particularly the US Army is trying to reshape itself in accordance with what it believes warfare will be like over the next two decades or so.<sup>2</sup> This paper attempts to provide a glimpse into the logistical aspects of the Army's proposed force structure and some of its unintended problems.

### WHY TRANSFORM

The uncertainties facing the nation demand that the US Armed Forces adapt its capabilities to address the emerging threats. Transformation is unavoidable - the US military must prepare for the future. Amazingly the impetus to transform the US Armed Forces did not come from within the ranks of the Department. The transformation cornerstone was laid well before the stunning events of September 11, 2001 (9/11), and even before Secretary of Defense Donald Rumsfeld and Director of the Department of Defense (DOD), Office of Force Transformation, Vice Admiral (R) Arthur Cebrowski began advocating the US military's need to transform. It came from the then-Presidential candidate, Governor George W. Bush who outlined a new and somewhat unique transformational strategy in a campaign speech at the Citadel in 1999. "The real goal is to move beyond marginal improvements - to replace existing programs with new technologies and strategies, to use this window of opportunity to skip a generation of technology."<sup>3</sup> The future President went on to say he would "encourage a culture of command where change is welcomed and rewarded, not dreaded"<sup>4</sup> and vowed to fence at least 20 percent of the procurement budget for acquisition programs that supported transformation.

The events of 9/11 have merely amplified the urgency to transform.<sup>5</sup> There exists a wealth of evidence that globalization is profoundly changing our world and uncovering

previously unforeseen adversaries.<sup>6</sup> While military transformation in of itself is not a new phenomenon and has occurred throughout history, the stunning emergence of a homeland terrorist threat has singularly altered the future of the US Armed Forces, and in particular the US Army.<sup>7</sup> In June 2004, the Secretary of Defense acknowledged that “future dangers will less likely be from battles between great powers, and more likely from enemies that work in small cells, that are fluid and strike without warning anywhere, anytime....”<sup>8</sup> While the Pentagon is assuming risk in transforming while at war, the alternatives of not transforming or not transforming fast enough appear more unacceptable.

#### WHAT HISTORY TELLS US ABOUT PAST MILITARY TRANSFORMATIONS

The subject of transformation has been a major reoccurring issue for the US Armed Forces. In fact, when it comes to military transformation it usually promises more than it can deliver. Time after time what appeared to be a quantum leap in capability was merely the clever application of an existing technology. This is not to infer that history cannot guide transformation, but that the initial recommendations made about the future and what changes the military should make to prepare for that future will most likely be wrong – or not exactly right. The stark reality is that the basic nature of warfare has evolved only slowly,<sup>9</sup> and regrettably it has been the “logistics transformation” that has lagged behind the other aspects of modern warfare. Such thinking is woefully shortsighted and a pattern the US military must break.

One of the more pressing challenges with the current transformation strategy is that we are almost four years into it and there is not a clear understanding below the Pentagon, if even there, of what it all means. Some say it is about injecting new technology into the military, while others believe transformation is about new ways of buying weapon systems. Still others profess that transformation is about modularity and the wholesale reorganization of unit formations.<sup>10</sup> For most it represents the military’s final step from the Industrial Age into the Informational Age – the ultimate pairing of the computer microprocessor with military equipment. It represents a concerted shift in emphasis from the individual tank and aircraft to a network of available weapons systems that can deliver the desired effect.<sup>11</sup>

The other significant challenge to transformation is the Department’s unending struggle with jointness. As successful as Operation Enduring Freedom and Operation Iraqi Freedom (OIF) were there are still ample examples of critical Service non-interoperability problems at the operational level.<sup>12</sup> The pre-OIF interoperability problems that were once casually disregarded as trivial Service concerns are now polarizing the senior leadership. These strong willed leaders are at odds about where the Service-centric prerogatives end and Service



interoperability begins with respect to joint operational logistics. The US military leadership is at a crossroads and without a consensus may be unknowingly headed for a fatal resourcing and force structure collision in Congress.

The Service-centric camp reflects the existing system - while not perfect, it is functional. Where the Services define their needs at the component level and the joint operational level needs are worked into the process as each Service develops its program.<sup>13</sup> While this process is beginning to change slowly, at some point the Services must demonstrate that they can match their successes on the battlefield with successes in joint transformation. The peacetime trend to subordinate effectiveness with efficiency and to encourage inter-Service competition must give way to greater inter-Service interoperability. Nevertheless, the rhetoric has not matched reality and, left to their own devices, the Services continue to offer to eliminate inappropriate force structure while preserving unneeded force structure.<sup>14</sup> In the case of the US Army, the desire to be tactically relevant is rapidly eclipsing the desire to retain the capability to provide joint operational logistics.

Clearly the task of transforming the US military will be a complex and messy undertaking, especially since the joint integrating concepts are coevolving with the Service-specific roadmaps and are beginning to come into direct competition with preexisting Service programs.<sup>15</sup> Nevertheless, during the Cold War era Congress devised a system to balance Service capabilities and encourage Service interoperability while leaving certain Service redundancies intact. The complexities of the Department's operating systems were harnessed through a code of statutes commonly referred to as Title 10.<sup>16</sup>

In general Title 10 was a series of instructions about the capabilities required in each of the Services. These initial instructions have expanded to address where forces should be stationed, their general structure, their battlefield employment and how they could mutually support one another. It was within this paradigm that the US Army, which represented the preponderance of land forces, was instructed to provide the majority of the theater-level common user logistics (CUL) and transportation forces. These nonorganic general support or Echelon Above Corps (EAC) forces have performed the theater-enabling functions for all US Armed Forces since the end of World War II. During this time, almost without exception logistical superiority has been crucial to successful military operations. Time and time again it was the US Army's role as the joint operational "arsenal" that made the critical difference in land combat operations.

## THE CHANGING CHARACTER OF LAND WARFARE

"Our inability to predict the future does not mean that we know nothing about it..."<sup>17</sup>

According to Admiral (Ret) Cebrowski, it is time to turn the old NMS upside-down. The US has always been strategically defensive and operationally offensive. It's becoming obvious that being operationally defensive is more advantageous and because the consequences are so grave, strategic offense may be necessary.<sup>18</sup> This switch defies all our past strategic thinking and changes the way we will fight future wars. The norm will be more independent and self-sufficient units, "we're in the age of the small, the fast and the many."<sup>19</sup> There is no mistake that the Army is using this new vision to promote its new Unit-of-Action (UA) force design.<sup>20</sup>

The Pentagon's professed outcome of transformation is a "fundamentally joint, network-centric, distributed force capable of rapid decision superiority and massed effects across the battlespace..."<sup>21</sup> It is a vision based on the belief that emerging technologies will all but dissipate Clausewitz's "fog of war" through shared battlespace awareness - the glue to how joint expeditionary forces will communicate and collaborate on distant battlefields. Battlespace awareness will allow commanders to know the exact location of all the friendly and enemy units in real time. These smaller, geographically dispersed but effectively interconnected, and highly mobile formations enabled with battlespace awareness in theory will dominate enormous terrain eliminating the "movement to contact".

The other distinguishing characteristic of future land warfare is the inherent ability for these smaller but more mobile forces to shift from one type of operation to another, such as from stability operations to major combat operations. The two integrating concepts required to enable this shift are joint command and control (C2) and joint logistics. Both concepts are necessary and must work in tandem to allow for the rapid transition between types of operations. While there appears to be general agreement on the joint C2 aspects of the new battlespace, it is the joint logistics concepts that are being so fiercely contested. In reality, what is really being contested is money, lots and lots of money. Logistics is money, and any shift would involve billions of dollars and immediately impact Service programs.

There is a growing awareness that the paramount barrier to transformation is joint logistics. To get beyond marginal improvements the Services must get beyond the money aspect of logistics. Not surprisingly, the Department's joint logistic integrating concepts do little to amplify how this goal is to be achieved. Primarily because Congress still allocates funding to each of the Services in concert with Title 10 mandates. This archaic process enables the Services to invest billions of dollars into parochial logistics systems and requirements that unfortunately can hinder interoperability. Most agree that the current concepts for joint

operational logistics are less than optimal, but that any sudden shift away from the existing concepts could lead to even greater disasters. Despite the rhetoric, joint operational logistics remains at the bottom of the list of priorities among the Services and figures very little into their Service transformation calculations.

Secondly, the decisive nature of previous land combat experiences has nurtured a generation of commanders who prefer organizational autonomy. These prejudices continue to flame inter-Service rivalries. Good land component commanders are trained to avoid relying on others for their tactical survival or logistical sustainment - at all costs. It is this combination of lack of trust among our component commanders and the existing parochial Service logistics systems that cripples the joint operational logistics system.

Finally, the Service's authority to internally classify units as either organic or nonorganic is exposing the emerging contradiction in Army's transformation roadmap and existing Title 10 mandates. Taking a page from the US Marine Corps, the US Army is hastily creating more tactically organic units - choosing to ignore operational logistic requirements. The crux remains with the long standing command relationship principle that organic units are not considered available for general support or other operational level theater sustainment missions. Organic units are deemed mission essential to the force to which they are assigned. They are not available to provide general support to the joint force.

#### **WHY TRANSFORM LOGISTICS**

In February 2004, Admiral (Ret) Cebrowski professed that "We need to change the logistics system. Logistics has always been central to the military. But it's also been a drag on what the military could do. And right now, it's a drag on transformation because so much money and so many people are absorbed in logistics processes that we need to reach for new constructs."<sup>22</sup> When the Pentagon discusses weaknesses in the current transformation strategy or operational missions, logistical sustainment quickly rises to the fore. The distinct disjointedness of the existing logistics systems stem from multiple Service concepts being developed and fielded simultaneously and independently. The transformation strategy calls for a joint logistics concept based on the changing characteristics warfare, but since the warfighting concepts are still being developed the logistics sustainment for those concepts are understandably lagging behind – way behind. As the operational concepts mature, the unspoken expectation is that the logistics concepts will close the gap.<sup>23</sup>

## OBSERVATIONS ON DEFENSE LOGISTICS

The DOD is one of the largest and most complex organizations in the world. It spends billions of dollars annually to operate its logistics systems. These logistics systems have long-standing well documented problems in interoperability. Problems further complicated by the duplicative nature of the Service stovepipes, which at inception were designed to provide Service redundancies to protect against tactical failures. Yet, these pervasive decades-old independent Service stovepipes are still the fundamental flaw of the entire logistics architecture and the main obstacle to a future joint logistics system. Undoubtedly because the best mechanisms to fund the Services in peace time, however archaic, do not equate to the best mechanisms to sustain a joint expeditionary force in war time. In 2002, a Government Accountability Office (GAO) report found over 200 inventory systems throughout the Department, of which not a single system was integrated.<sup>24</sup>

The Pentagon clearly lacks the ability to control and account for the multitude of Service non-integrating logistic systems. There simply is not a single system that can provide Department-wide total asset visibility over the entire inventory of supplies and repair parts - an inventory in excess of several billion dollars. This disparity is best illustrated in an example where separate Service units could be side by side in an operational deployment and not be mutually supporting. Past attempts to transform the Department's logistic systems have failed, because consensus on key capabilities for each Service differed so widely. Additionally, the Services have no reason to integrate since they receive funding from multiple appropriations that allows them to continue to make their own parochial logistics decisions.<sup>25</sup>

## US ARMY LOGISTICS: A CRITICAL COMPONENT OF THE JOINT TEAM

In the past, US Army logistics had taken a supply-based approach by generating "iron mountains" of equipment and supplies in a theater of operation. The logistic measure of efficiency was stated in the number of days of supply that were actually on hand. This Cold War era sustainment strategy was designed with the assumption that combat operations would be conducted in a developed theater with unfettered access to an extensive host-nation infrastructure. It is comforting to know that amassing supplies will work in a mature theater when the demand is predictable and the situation permits the time and strategic lift to accumulate stockpiles. The challenge, however, is that the new threats are emerging from the underdeveloped and ungoverned regions of the world, those areas of the world lacking any host-nation infrastructure. The first major test of the supply based logistics system was Operation Desert Storm, an expeditionary operation that debunked the Cold War sustainment

strategy. It is not surprising that a post-Desert Storm, 1992 GAO report concluded that in addition to no asset visibility and poor materiel distribution, the long processing times for requisitions led to a complete loss in confidence of the supply based logistics system.<sup>26</sup>

The US Army's introduction of its just-in-time logistics concept was an attempt to resolve Desert Storm failures with an off-the-shelf commercial supply chain management practice, a concept that reduced on-hand inventories in favor of in-transit visibility and a responsive land based distribution capability. The Army's new measure of efficiency was order wait time, not days of supply on hand. The just-in-time logistics concept worked well in garrison, but quickly proved unreliable once deployed away from a fixed infrastructure, in part because the Army's shift away from the traditional supply based logistics system to the much leaner, just-in-time distribution based system was never really achieved. The Army's responsive distribution capability was its EAC truck companies which were either never acquired or left unresourced in the reserve component, a decision based on cost and force structure constraints. The erroneous application of new technology on top of old formations and processes proved problematic once it was deployed into an expeditionary environment. That last tactical mile from the strategic transportation hub to the final unit location, which was broken in the supply-based system, was further exacerbated in the distribution-based system.

OIF was one of the largest logistics efforts that the US military has ever undertaken.<sup>27</sup> In order to put the logistics effort into perspective, at the outset of the operation the \$28.1 billion obligated for OIF \$19.1 billion or 68 percent was spent on logistics and transportation costs.<sup>28</sup> Although the major combat operations during the initial phases were extremely successful, from the beginning there were substantial logistics problems at the operational level as a result of unmet Service Title 10 responsibilities, in particular the US Army responsibilities. The most significant problems were asset visibility due to container documentation and an inadequate transportation system to distribute materiel forward from the strategic air and sea ports – remarkably similar to the problems of Desert Storm.<sup>29</sup> The logistic systems weaknesses resulted in supply shortages, backlogs of material delivered into theater but not delivered to the requesting unit, a discrepancy of \$1.2 billion between the amount of materiel shipped and the acknowledged by the units as received, cannibalization of equipment and duplication of supply requisitions.<sup>30</sup> The most dramatic being an unplanned operational pause.

Once again a weak EAC structure inadvertently set the campaign's operational limits.<sup>31</sup> "After the dust storm, the loss of helicopters and the extended battle around Najif, <sup>32</sup> the Coalition Forces Land Component Commander (CFLCC) received a request from V Corps to stop the attack to allow 3<sup>rd</sup> Infantry Division to conduct a much-needed resupply of its units. In

the CFLCC tactical operations center, the temporarily halting of the ground attack made sense for V Corps. The limited logistic footprint established above the organic support structure at the commencement of OIF is largely responsible for the operational pause south of Baghdad. There was simply not enough of the right kind of logistics forces available to sustain the wholesale advance of US Army and US Marine forces beyond a certain point. The existing structure was not capable of meeting the operational commander's expectations at the scale required.<sup>33</sup>

## **THE ARMY ROADMAP**

The Army has moved to break its long-standing division structure in favor of smaller, more modular tactical organization. They are not studying it anymore; they are doing it. In the words of Army Chief of Staff, General Peter J. Schoomaker, "This is not business as usual...we are an Army transforming and at war."<sup>34</sup> Seizing on many of the now vogue concepts proposed in 1997 by COL (Ret) Douglas Macgregor in his book, "Breaking the Phalanx," General Schoomaker is making the Army more "relevant and ready,"<sup>35</sup> a remarkable shift that at first glance appears to be reducing the Army end strength. The reality is that it is actually expanding the Army by creating more self-contained brigade combat teams from the existing divisional structure. The Army's leadership challenge remains to uncover the wherewithal to implement the transformation strategy. Many believe that it has no recourse but to expand the practice of siphoning off EAC forces to equip and man the new UAs in accordance with a timeline that is proving too optimistic to execute. Ultimately it is this seemingly benign dismantling of the misunderstood EAC force structure that will eventually put the entire US military at risk.<sup>36</sup>

## **A CAMPAIGN- QUALITY MODULARIZED ARMY**

According to General Schoomaker, the key to building a joint and expeditionary Army lays with modularity. The emerging threat requires near-simultaneous employment and deployment of agile formations to multiple locations across the globe. The divisional army of the past was too top-heavy, cumbersome, and did not adapt well to the dynamic battlespace of today's fight. By shifting to the UA design the Army will significantly improve its contribution to the overall joint expeditionary campaign. While the inherent robustness and improved self-sufficiency of the UAs will substantially improve the Army's ability to deploy rapidly and fight on arrival, the implicit, but undeclared corollary is that the US Army will no longer have to deploy substantial nonorganic EAC forces to the theater. Astonishingly the absence of even a theoretical debate questioning the confidence being espoused by the Army's force developers is a bit of hubris that may prove fatal.

While it is certainly too early to speculate about the Army's proposed modularity strategy and its corresponding roadmap. The idea to modularize the force is significantly less shocking or daring than disassembling the EAC structure to accomplish it. The nonorganic combat support and combat service support forces that provide the in-theater CUL and transportation support to all forces regardless of Service or nationality could disappear from the ranks. The same theater sustainment and distribution forces are designed to connect the strategic air and sea ports of debarkation with the tactical supply support activities.<sup>37</sup> That identical Army infrastructure was overwhelmed in Desert Storm and again in OIF; that very section of the theater sustainment structure that can least afford further reduction is quietly being divested by the US Army.

Among its critics, the new UA scheme is a contradiction in design that will finally attrite the already limited pool of theater enabling forces by assigning them to new brigade combat teams. Creating a new command relationship that places these critical support assets in a direct support status - basically making them not available for theater wide sustainment mission - impacts on the entire joint expeditionary force, ultimately, staling or reversing Service interoperability since it requires the Services to be more self-sustaining. To its proponents it remains an ingenious concept that will allow for perpetual adaptation and will establish new requirements for future force structure, equipment, and funding. To them it is seen as the US Army's version of the much-fabled US Air Force argument of how can the joint community refute the need for a runway after it has obligated all its funds on supporting airbase infrastructure. The Army's version is strikingly similar in how can the joint community refute the need for theater enabling forces, even after it has moved all its existing structure from a nonorganic to an organic support relationship.

#### THE WAY AHEAD: RAISING THE LOGISTIC PROFILE

In the future, the US military will most likely be engaged in joint and coalition operations. In order to ensure that those operations are supported efficiently, the Services and participating coalition partners will need to do more than what has been done in the past - merely coordinating their logistics sustainment. Although each Service is currently responsible for providing logistical support to its own forces, all the Services will likely need some level of nonorganic support. Once deployed, it seems intuitive that the Services would not want to rely solely on their parochial logistics systems. At the strategic and operational level it is vastly more important that the Services do not compound strategic lift requirements with duplicate demands, or once in theater drive up local sources of supply through competitive contracting. The Army

simply cannot ignore or attempt to divorce itself from the recognition that it will still be expected to carry most of the logistic burden.<sup>38</sup>

Any future logistic system must be expeditionary-capable. Somehow the obvious answer that a smaller, more distributed force will still need CUL and transportation support has escaped the force developers. Despite over 15 years of just-in-time logistics experience the US Army continues to make the same mistakes in new deployments, as if past lessons are not being learned. The Army's logistics transformation must be much deeper than merely putting new technology on top of old formations and old processes, as the just-in-time concept tried but failed to accomplish in the 1990s. According to General Schoomaker, "The Army's preeminent challenge is to reconcile expeditionary agility and responsiveness with staying power...."<sup>39</sup> In addition to lightening the combat loads of units and increasing reliance on propositioned stocks,<sup>40</sup> the most significant means to improving the staying power is with adequately sourcing the theater level CUL and transportation capabilities – not eliminating them.

At the tactical level, the Army is evolving to assigned organic support and eliminating the Cold War EAC layered and centralized sustainment. While the past practice of task organizing sustainment capabilities may no longer apply, the benefit of pooling resources with prearranged mutual support agreements is still a valid concept. The UA ensures self-sustainability at the brigade level vice operational efficiency at the macro level. The shift from a top-down macro scale approach to a bottom-up micro approach to operational logistics dilutes the joint commander's ability to prioritize and allows the Services to hide capabilities within organic formations.

The reality remains that the logistics requirement to equip and man the UAs exceeds the entire active component inventory of distribution forces. Force design must catch up with reality. The cost of on-going combat operations in OIF in conjunction with sustaining the acquisition of Stryker-equipped UAs and resetting the equipment being consumed in OIF will exhaust the current supplemental funding stream. The UA nonorganic aspects of the Army's transformation will most likely never be accomplished. All the while the Army will continue to dismantle the EAC structure under the guise of maintaining transformation.

On December 20, 2004 the Department of the Army G3 received an information briefing on the large number of unresourced distribution capabilities following the Modular Support Force Analysis, or what is being referred to as the "mini-Total Army Analysis". The discussion centered on critically short logistic capabilities in the UAs. The recommendations revolve around a decision to add an additional 13 truck companies to the active component and delay the inactivation of eight reserve companies.<sup>41</sup> The decision has been indefinitely postponed.



The Army's transformation is proving to be much more difficult to achieve than originally envisioned. The presumption is that all organic UA requirements will be approved leaving the nonorganic EAC requirements unresourced. The lack of future theater Army EAC forces to provide general nonorganic level support will adversely affect future expeditionary operations,<sup>42</sup> and as expected, most of the Army transformation effort is being applied to the maneuver aspects of the new UA, leaving most of the logistics transformation as important but unfinished business.

#### **THE UNHINGING OF TITLE 10 LOGISTICS SUPPORT**

It is time to recognize that we are in an interdependence hole, and stop digging. The need to resolve the emerging contradictions of statutory Service responsibilities mandated under Title 10 of the United States Code and the DOD transformation strategy cannot be ignored. The current US Army Roadmap for operational logistical sustainment will decrease the nonorganic support the US Army can provide to a joint expeditionary force. There continues to exist a number of challenges to how Service-specific, in particular the Army transformation strategies are inadvertently putting the theater level operational logistics at dire risk.

First, the Title 10 statutes are simply outdated and wasteful, a dilapidated code of statutes dating from the McNamara era that continues to perpetuate outdated warfighting concepts and Department wide abuse through archaic funding procedures. The method Congress uses to fund the Services is unacceptable and perpetuates Service-centric results to joint requirements. Title 10 statutes are amended by every congressional session and have emerged as an irresistible forum for congressional members to protect Service-specific programs. It is an inefficient practice that squanders billions of dollars, money that could be used to boost readiness, improve the quality of life for our personnel and fund investments in new systems and technologies. At the same time, joint force commanders have become increasingly intolerant of poor Title 10 support and want proof that the Services are making the necessary adjustments.

Second, the concept of modularity is an apparent go-it-alone transformation strategy for the Army. General Schoomaker was crucial to the Army's shift to brigade modularity. Beyond his political shrewdness, his vision for the Army fits well within the Department's vision "...of the small, the fast and the many"<sup>43</sup> – at the tactical level. From General Schoomaker's perspective the Army's future UAs are both more agile and deployable, which to him is innovative and prudent risk-taking. However, the almost exclusive focus on the new UAs as maneuver elements have encouraged a dangerous and uninformed belief that the logistics will take care of

itself. Perhaps the most recent disappointment indicating that the US military and the Army are not prepared to make the transition to a joint operational logistics concept was revealed in the addition of joint-enabled logistics as one of the seven "issues of regret" released in the Strategic Transformation Appraisal for FY 2004.<sup>44</sup>

Finally, the soaring cost for the Global War on Terrorism and the associated costs for resetting the force structure mean that federal dollars will be much scarcer in the out-years. The heavy use of equipment in Iraq and Afghanistan has caused weapons systems to wear out faster than anticipated and are intensifying a looming budget crunch which could create immense pressure for the Services to truncate their transformation roadmaps. Judging from past Army decisions, a truncated roadmap means that most of the non-UA logistical requirements will never be addressed; this will eventually impose a heavy penalty on joint operational commanders. If the Department is successful in transforming there may well be Service winners and losers.<sup>45</sup>

## **CONCLUSIONS**

A crunch is coming, and eventually all of the Services will feel its impact. Although national defense and homeland security have received generous funding in recent years, this cannot continue indefinitely. Defense budgets of the future almost certainly will be tighter. The analysis paints a chilling picture. The status quo is unrealistic and unacceptable. Nevertheless the debate concerning transformation and the best strategy for achieving it has raged continually since 9/11. The proposals at first seemed very good, but the results unveiled in the August 2004 Service roadmaps proved disappointing. They were focused on improving conventional military capabilities – not towards greater interoperability or the emerging threats.<sup>46</sup>

Many of the funding and logistics sustainment ideas and practices in Title 10 once considered innovative are now obsolete. Not surprisingly, there is extreme resistance to changing these entrenched ways of doing things - no matter how outdated and inefficient they have become. A more frugal mindset will be vital as the Pentagon's budget becomes tighter. Difficult choices are inevitable and the Services have historically underestimated their costs for existing programs in the Future Years Defense Programs. The Pentagon basically has too many programs for the available dollars.<sup>47</sup>

To close the widening gap, the Services must develop a "comprehensive divestiture strategy" to generate growth while resisting the urge to eliminate the non-Service-centric interoperability structure.<sup>48</sup> Major weapons systems, such as aircraft carriers, fighter jets, artillery and submarines are likely to be much less useful in potential 21<sup>st</sup> century crises, which

is directly counter to what both Congress and the defense industry have vested interests in keeping. In the Army's case, modularity could eventually eliminate its capability to conduct operational sustainment of any significant scale.

The US Army was once the preeminent player in expeditionary warfare. Its decision to return to that past as a modular force has created a huge challenge in how to logistically support and sustain the theater. Denying the reality that the modular Army does not contain the sufficient EAC sustainment capability is irresponsible and courts with disaster. Given that the public's expectations for a strong national defense are unlikely to diminish, tangible results in transformation are becoming overdue.<sup>49</sup> We have a window of opportunity to ensure that basic Service functions, from national defense to transformation are secure and sustainable over the long term.<sup>50</sup> Difficult choices can be eased if we take steps now to make the Department and its Service logistic systems more economical and efficient, and interoperable.

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## ENDNOTES

<sup>1</sup> Department of Defense, *Transformation Planning Guidance*, (Washington, D.C.: Department of Defense, April 2003); available from <[http://www.oft.osd.mil/library/library\\_files/document\\_129\\_Transformation\\_Planning\\_Guidance\\_April\\_2003\\_1.pdf](http://www.oft.osd.mil/library/library_files/document_129_Transformation_Planning_Guidance_April_2003_1.pdf)>; Internet; accessed 6 February 2005.

<sup>2</sup> Department of Defense, Office of Force Transformation webpage, available from <<http://www.oft.osd.mil>>. Also see Thomas G. Mahnken and James R. Fitzsimonds, "Tread-Head or Technophiles? Army Officer Attitudes Toward Transformation", *Parameter* 34, (Summer 2004): 60.

<sup>3</sup> Thomas E. Ricks and Josh White, "Scope of Change in Military Is Ambiguous, Transformation to Some Appears Minor to Others," *Washington Post*, 1 August 2004, sec. A, p. 6; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_392\\_Washington%20Post.doc](http://www.oft.osd.mil/library/library_files/article_392_Washington%20Post.doc)>; Internet; accessed 6 February 2005.

<sup>4</sup> Ibid.

<sup>5</sup> David M. Walker, "Defense Transformation: A Battle The U.S. Cannot Afford To Lose", *National Defense* (September 2004), 1; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_408\\_National%20Defense1.doc](http://www.oft.osd.mil/library/library_files/article_408_National%20Defense1.doc)>; Internet; accessed 6 February 2005.

<sup>6</sup> David Ignatius, "Winning a War for the Disconnected," *Washington Post*, 14 December 2004, sec. A, p.27; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_424\\_Washington%20Post.doc](http://www.oft.osd.mil/library/library_files/article_424_Washington%20Post.doc)>; Internet; accessed 6 February 2005.

<sup>7</sup> Steven Metz, "Unlearning Counterinsurgency," *ROA National Security Report*, December 2004, 119.

<sup>8</sup> Arthur K. Cebrowski, "Transformation and the Changing Character of War," *Transformation Trends*, 17 June 2004; available from <[http://www.oft.osd.mil/library/library\\_files/trends\\_370\\_Transformation%20Trends-17%20June%202004%20Issue.pdf](http://www.oft.osd.mil/library/library_files/trends_370_Transformation%20Trends-17%20June%202004%20Issue.pdf)>; Internet; accessed 6 February 2005.

<sup>9</sup> John A. English, *Marching Through Chaos: The Descent of Armies in Theory and Practice* (New York: Praeger, 1996), 198.

<sup>10</sup> Arthur K. Cebrowski, "Network Centric Warfare and Transformation," 22 January 2003; available from <[http://www.oft.osd.mil/library/library\\_files/speech\\_143\\_CEBROWSKI%20SPEECH%20TO%20NETWORK%20CENTRIC%20WARFARE%20CONFERENCE.doc](http://www.oft.osd.mil/library/library_files/speech_143_CEBROWSKI%20SPEECH%20TO%20NETWORK%20CENTRIC%20WARFARE%20CONFERENCE.doc)>; Internet; accessed 6 February 2005.

<sup>11</sup> Jason Sherman, "Pentagon's Transformation Czar to Retire Because of Health Concerns," *Inside Defense.com*, 19 January 2005, available from <[http://www.oft.osd.mil/library/library\\_files/article\\_428\\_InsideDefense.doc](http://www.oft.osd.mil/library/library_files/article_428_InsideDefense.doc)>; Internet; accessed 6 February 2005.

<sup>12</sup> C.A. Murdock, et al. "Beyond Goldwater-Nichols: Defense Reform for a New Strategic Era, Phase 1 Report," Center for Strategic and International Studies, March 2004, available from <[http://www.csis.org/isp/bgn/docs/bgn\\_ph1\\_report.pdf](http://www.csis.org/isp/bgn/docs/bgn_ph1_report.pdf)>; Internet; accessed 6 February 2005.

<sup>13</sup> Joint Defense Capabilities Study Team, "Joint Defense Capabilities Study: Final Report," December 2003.

<sup>14</sup> Amy Klamper, "Pentagon Plan Might Squeeze Firms," *Congress Daily*, 4 January 2005, 2; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_427\\_Congress%20Daily.doc](http://www.oft.osd.mil/library/library_files/article_427_Congress%20Daily.doc)>; Internet; accessed 6 February 2005.

<sup>15</sup> Department of Defense, Office of Force Transformation, *Military Transformation: A Strategic Approach*, Fall 2003; available from <[http://www.oft.osd.mil/library/library\\_files/document\\_297\\_MT\\_StrategyDoc1.pdf](http://www.oft.osd.mil/library/library_files/document_297_MT_StrategyDoc1.pdf)>; Internet; accessed 6 February 2005.

<sup>16</sup> *Title-10 of the United States code*, (2004); available from [http://www.usc\\_sec\\_10\\_00002464---000-.htm](http://www.usc_sec_10_00002464---000-.htm); Internet; accessed 6 February 2005.

<sup>17</sup> Cebrowski, "Transformation and the Changing Character of War," 1.

<sup>18</sup> Arthur K. Cebrowski, "Subcommittee on Terrorism, Unconventional Threats and Capabilities," written statement presented to the 108<sup>th</sup> Cong., 1<sup>st</sup> sess. Washington, D.C.: U.S. Department of Defense, 2004; 108<sup>th</sup> Congress, 26 February 2004; available from <<http://armedservices.house.gov/openingstatementsandpressreleases/108thcongress/04-02-26cebrowski.pdf>>; Internet; accessed 6 February 2005.

<sup>19</sup> Samantha L. Quigley, "Transformation Chief Outlines Strategy for New Battlefield," American Forces Press Service, Washington, D.C., 5 August 2004, available from <[http://www.oft.osd.mil/library/library\\_files/article\\_396\\_Transformation%20Chief%20Outlines%20Strategy%20for%20New%20Battlefield.doc1](http://www.oft.osd.mil/library/library_files/article_396_Transformation%20Chief%20Outlines%20Strategy%20for%20New%20Battlefield.doc1)>; Internet; accessed 6 February 2005.

<sup>20</sup> Peter J. Boyer, "A Different War", *New Yorker*, 1 July 2002, 54.

<sup>21</sup> Department of Defense, "Transformation Planning Guidance," (Washington, D.C.: U.S. Department of Defense, April 2003), available from <[http://www.oft.osd.mil/library/library\\_files/document\\_129\\_Transformation\\_Planning\\_Guidance\\_April\\_2003\\_1.pdf](http://www.oft.osd.mil/library/library_files/document_129_Transformation_Planning_Guidance_April_2003_1.pdf)>; Internet; accessed 6 February 2005.

<sup>22</sup> Michael Woodgerd, "Mobilus Initiative: Airships as a New Aerospace Industry Segment," *Transformation Trends*, 22 July 2004; available from <[http://www.oft.osd.mil/library/library\\_files/trends\\_371\\_Transformation%20Trends-22%20July%202004%20Issue.pdf](http://www.oft.osd.mil/library/library_files/trends_371_Transformation%20Trends-22%20July%202004%20Issue.pdf)>; Internet; accessed 6 February 2005.

<sup>23</sup> Sandra Jontz, "Battlefield Intelligence, Logistic Not Seen as Transformation Success Stories," *European Stars and Stripes*, 4 August 2004, 1.

<sup>24</sup> General Accounting Office, *DOD Management: Examples of Inefficient and Ineffective Business Processes* (Washington, D.C.: U.S. General Accounting Office, 25 June 2002), 1; available from <<http://www.gao.gov/new.items/d02873t.pdf>>; Internet; accessed 6 February 2005.

<sup>25</sup> Department of Defense, "Sense and Respond Logistics Concept Development, Analysis, and Proof-of-Concept Capability Integration (SARL), Version 1.3" (Washington, D.C.: U.S.

Department of Defense, 3 June 2004), 21; available from <[http://www.oft.osd.mil/initiatives/srl/S&RL\\_Concept\\_Short.doc](http://www.oft.osd.mil/initiatives/srl/S&RL_Concept_Short.doc)>; Internet; accessed 6 February 2005.

<sup>26</sup> General Accounting Office, *Operation Desert Storm: Lack of Accountability Over Materiel During Redeployment* (Washington, D.C.: U.S. General Accounting Office, 23 September 1992), 1; available from <<http://161.203.16.4/d35t11/147771.pdf>>; Internet; accessed 6 February 2005.

<sup>27</sup> General Accounting Office, *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom* (Washington, D.C.: U.S. General Accounting Office, 18 December 2003), 13; available from <<http://www.gao.gov/new.items/d04305r.pdf>>; Internet; accessed 6 February 2005.

<sup>28</sup> Ibid.

<sup>29</sup> Department of Defense, "Conduct of the Persian Gulf War: Final Report to the Congress," (Washington, D.C.: Department of Defense, April 1992), 295-298; available from <<http://www.ndu.edu/library/epubs/cpgw.pdf>>; Internet; accessed 6 February 2005.

<sup>30</sup> General Accounting Office, *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom*, 15.

<sup>31</sup> Joint Chiefs of Staff, *Joint Warfare of the Armed Forces of the United States*, Joint Pub 1 (Washington D.C.: U.S. Joint Chiefs of Staff, 14 November 2000); available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp1.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp1.pdf)>; Internet; accessed 6 February 2005.

<sup>32</sup> Bing West and Major General Ray L. Smith, *The March Up: Taking Baghdad with the 1<sup>st</sup> Marine Division* (New York: Bantam Books, 2003), 83 -107.

<sup>33</sup> Ibid., 102.

<sup>34</sup> Donna Miles, "Schoomaker Says Army Transformation on Track," American Forces Press Service, Washington, D.C., 21 July 2004, available from <[http://www.defense.gov/news/Jul2004/n07212004\\_2004072104.html](http://www.defense.gov/news/Jul2004/n07212004_2004072104.html)>; Internet; accessed 6 February 2005.

<sup>35</sup> "Main Battle Tanks: Have they Reached the End of the Road," *Jane's Defense Weekly*, 12 September 2001, 81.

<sup>36</sup> Cebrowski, "Transformation and the Changing Character of War", 2.

<sup>37</sup> Joint Chiefs of Staff, *Joint Doctrine for Global Distribution*, Joint Publication 4-09 (Washington, D.C.: U.S. Joint Chiefs of Staff, 14 December 2001), 2; available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp4-09.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp4-09.pdf)>; Internet; accessed 6 February 2005.

<sup>38</sup> Joint Chiefs of Staff, *Joint Doctrine for Logistics Support of Multinational Operations*, Joint Pub 4-08 (Washington D.C.: U.S. Joint Chiefs of Staff, 25 September 2002); available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp4-08.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp4-08.pdf)>; Internet; accessed 6 February 2005.

<sup>39</sup> Peter J. Schoomaker, "The Way Ahead: Our Army at War...Relevant and Ready," (Washington, D.C.: U.S. Department of the Army, January 2004), 1; available from <<http://www.army.mil/thewayahead/foreword.html>>; Internet; accessed 6 February 2005.

<sup>40</sup> General Accounting Office, *Prepositioning: Observations on Army and Marine Corps Programs during Operation Iraqi Freedom and Beyond* (Washington, D.C.: U.S. General Accounting Office, 24 March 2004), 1; available from <<http://www.gao.gov/highlights/d04562high.pdf>>; Internet; accessed 6 February 2005.

<sup>41</sup> Department of the Army, Chief of U.S. Army Transportation, *Significant Activities Report*, Fort Eustis, January 2005, 8.

<sup>42</sup> General Accounting Office, *Military Operations: DOD's Extensive Use of Logistics Support Contracts Requires Strengthened Oversight* (Washington, D.C.: U.S. General Accounting Office, July 2004), 1; available from <<http://www.gao.gov/highlights/d04854high.pdf>>; Internet; accessed 6 February 2005.

<sup>43</sup> Quigley, 1.

<sup>44</sup> Amy Butler, "Pentagon Transformation Analysis Outline Military Capability Gaps," *Defense Daily*, 19 November 2004, 1; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_422\\_Defense%20Daily.doc](http://www.oft.osd.mil/library/library_files/article_422_Defense%20Daily.doc)>; Internet; accessed 6 February 2005.

<sup>45</sup> Greg Jaffe, "Rumsfeld's Gaze Is Trained Beyond Iraq: Defense Chief Focuses on Reshaping Military to Fight Unconventional Foes in Post-911 World," *Wall Street Journal*, 9 December 2004, 4; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_423\\_Wall%20Street%20Journal.doc](http://www.oft.osd.mil/library/library_files/article_423_Wall%20Street%20Journal.doc)>; Internet; accessed 6 February 2005.

<sup>46</sup> Klamper, 2.

<sup>47</sup> General Accounting Office, *Future Years Defense Program: Actions Needed to Improve Transparency of DOD's Projected Resource Needs* (Washington, D.C.: U.S. General Accounting Office, May 2004), 1; available from <<http://www.gao.gov/highlights/d04514high.pdf>>; Internet; accessed 6 February 2005.

<sup>48</sup> Lorenzo Cortes, "Transformation Chief Calls for Better Cost Strategy in Defense Procurement," *Defense Daily*, 20 December 2004; available from <[http://www.oft.osd.mil/library/library\\_files/article\\_426\\_010405\\_1.doc](http://www.oft.osd.mil/library/library_files/article_426_010405_1.doc)>; Internet; accessed 6 February 2005.

<sup>49</sup> Ricks, 6.

<sup>50</sup> General Accounting Office, *DOD Management: Examples of Inefficient and Ineffective Business Processes*, 12.



## BIBLIOGRAPHY

- Boyer, Peter J. "A Different War." *New Yorker*, 1 July 2002, 54 - 61.
- Butler, Amy. "Pentagon Transformation Analysis Outline Military Capability Gaps," *Defense Daily*, 19 November 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_422\\_Defense%20Daily.doc](http://www.oft.osd.mil/library/library_files/article_422_Defense%20Daily.doc)>. Internet. Accessed 6 February 2005.
- Cebrowski, Arthur K. "Transformation and the Changing Character of War," *Transformation Trends*, 17 June 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/trends\\_370\\_Transformation%20Trends-17%20June%202004%20Issue.pdf](http://www.oft.osd.mil/library/library_files/trends_370_Transformation%20Trends-17%20June%202004%20Issue.pdf)>. Internet. Accessed 6 February 2005.
- \_\_\_\_\_. "Network Centric Warfare and Transformation," 22 January 2003. Available from <[http://www.oft.osd.mil/library/library\\_files/speech\\_143\\_CEBROWSKI%20SPEECH%20TO%20NETWORK%20CENTRIC%20WARFARE%20CONFERENCE.doc](http://www.oft.osd.mil/library/library_files/speech_143_CEBROWSKI%20SPEECH%20TO%20NETWORK%20CENTRIC%20WARFARE%20CONFERENCE.doc)>. Internet. Accessed 6 February 2005.
- \_\_\_\_\_. "Subcommittee on Terrorism, Unconventional Threats and Capabilities," written statement presented to the 108<sup>th</sup> Cong., 1<sup>st</sup> sess. Washington, D.C. : U.S. Department of Defense, 2004; 108<sup>th</sup> Congress, 26 February 2004. Available from <<http://armedservices.house.gov/openingstatementsandpressreleases/108thcongress/04-02-26cebrowski.pdf>>. Internet. Accessed 6 February 2005.
- Cortes, Lorenzo. "Transformation Chief Calls for Better Cost Strategy in Defense Procurement," *Defense Daily*, 20 December 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_426\\_010405\\_1.doc](http://www.oft.osd.mil/library/library_files/article_426_010405_1.doc)>. Internet. Accessed 6 February 2005.
- Downing, Mair. "Command puts Transformed Logistics Picture on Display," JFCOM Public Affairs release, 4 June 2003. Available from <[http://www.oft.osd.mil/library/library\\_files/press\\_228\\_Command%20puts%20transformed%20logistics%20picture%20on%20display.doc](http://www.oft.osd.mil/library/library_files/press_228_Command%20puts%20transformed%20logistics%20picture%20on%20display.doc)>. Internet. Accessed 6 February 2005.
- English, John A. *Marching Through Chaos: The Descent of Armies in Theory and Practice*. New York: Praeger, 1996.
- Goldwater-Nichols Act of 1986*, (1986). Available from <[http://www.dtic.mil/jcs/core/title\\_10.html](http://www.dtic.mil/jcs/core/title_10.html)>. Internet. Accessed 6 February 2005.
- Ignatius, David. "Winning a War for the Disconnected", *Washington Post*, 14 December 2004, sec. A, p.27.
- Jaffe, Greg. "Rumsfeld's Gaze Is Trained Beyond Iraq: Defense Chief Focuses on Reshaping Military to Fight Unconventional Foes in Post-9/11 World," *Wall Street Journal*, 9 December 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_423\\_Wall%20Street%20Journal.doc](http://www.oft.osd.mil/library/library_files/article_423_Wall%20Street%20Journal.doc)>. Internet. Accessed 6 February 2005.
- Jontz, Sandra. "Battlefield Intelligence, Logistic Not Seen as Transformation Success Stories," *European Stars and Stripes*, 4 August 2004.

- Klamper, Amy. "Pentagon Plan Might Squeeze Firms" *Congress Daily*, 4 January 2005. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_427\\_Congress%20Daily.doc](http://www.oft.osd.mil/library/library_files/article_427_Congress%20Daily.doc)>. Internet. Accessed 6 February 2005.
- Mahnken, Thomas G., and Fitzsimonds, James R. "Tread-Head or Technophiles? Army Officer Attitudes Toward Transformation," *Parameters* 34, (Summer 2004): 57-72.
- "Main Battle Tanks: Have They Reached the End of the Road," *Jane's Defense Weekly*, 12 September 2001, 66-81.
- Metz, Steven. "Unlearning Counterinsurgency," *ROA National Security Report*, December 2004, 119-120.
- Miles, Donna. "Schoomaker Says Army Transformation on Track," American Forces Press Service, Washington, D.C., 21 July 2004. Available from <[http://www.defense.gov/news/Jul2004/n07212004\\_2004072104.html](http://www.defense.gov/news/Jul2004/n07212004_2004072104.html)>. Internet. Accessed 6 February 2005.
- Murdock, C.A., et al. "Beyond Goldwater-Nichols: Defense Reform for a New Strategic Era, Phase 1 Report," Center for Strategic and International Studies, March 2004. Available from <[http://www.csis.org/isp/bgn/docs/bgn\\_ph1\\_report.pdf](http://www.csis.org/isp/bgn/docs/bgn_ph1_report.pdf)>. Internet. Accessed 6 February 2005.
- Quigley, Samantha L. "Transformation Chief Outlines Strategy for New Battlefield," American Forces Press Service, Washington, D.C., 5 August 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_396\\_Transformation%20Chief%20Outlines%20Strategy%20for%20New%20Battlefield.doc1](http://www.oft.osd.mil/library/library_files/article_396_Transformation%20Chief%20Outlines%20Strategy%20for%20New%20Battlefield.doc1)>. Internet. Accessed 6 February 2005.
- Ricks, Thomas E., and White, Josh. "Scope of Change in Military is Ambiguous, Transformation to Some Appears Minor to Others," *Washington Post*, 1 August 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_392\\_Washington%20Post.doc](http://www.oft.osd.mil/library/library_files/article_392_Washington%20Post.doc)>. Internet. Accessed 6 February 2005.
- Sherman, Jason. "Pentagon's Transformation Czar to Retire Because of Health Concerns," Inside Defense.com, 19 January 2005. Available from <[http://www.oft.osd.mil/library/library\\_files/article\\_428\\_InsideDefense.doc](http://www.oft.osd.mil/library/library_files/article_428_InsideDefense.doc)>. Internet. Accessed 6 February 2005.
- Schoomaker, Peter J. "The Way Ahead: Our Army at War...Relevant and Ready," Washington, D.C., January 2004. Available from <<http://www.army.mil/thewayahead/foreword.html>>. Internet. Accessed 6 February 2005.
- Title 10 of the United States code*, (2004). Available from <[http://www.usc\\_sec\\_10\\_00002464--000-.htm](http://www.usc_sec_10_00002464--000-.htm)>. Internet. Accessed 6 February 2005.
- U.S. Department of the Army. Chief of U.S. Army Transportation, *Significant Activities Report*, Fort Eustis, January 2005.
- U.S. Department of Defense. "Transformation Planning Guidance," Washington, D.C.: U.S. Department of Defense, April 2003. Available from <[http://www.oft.osd.mil/library/library\\_files/document\\_129\\_Transformation\\_Planning\\_Guidance\\_April\\_2003\\_1.pdf](http://www.oft.osd.mil/library/library_files/document_129_Transformation_Planning_Guidance_April_2003_1.pdf)>. Internet. Accessed 6 February 2005.

- U.S. Department of Defense. Office of Force Transformation webpage, Washington, D.C.: Department of Defense. Available at <<http://www.oft.osd.mil>>. Internet. Accessed 6 February 2005.
- U.S. Department of Defense. Office of Force Transformation, *Military Transformation: A Strategic Approach*, Washington, D.C.: Department of Defense, Fall 2003. Available from <[http://www.oft.osd.mil/library/library\\_files/document\\_297\\_MT\\_StrategyDoc1.pdf](http://www.oft.osd.mil/library/library_files/document_297_MT_StrategyDoc1.pdf)>. Internet. Accessed 6 February 2005.
- U.S. Department of Defense. "Sense and Respond Logistics Concept Development, Analysis, and Proof-of-Concept Capability Integration (SARL), Version 1.3," Washington, D.C.: U.S. Department of Defense, 3 June 2004, 21. Available from <[http://www.oft.osd.mil/initiatives/srl/S&RL\\_Concept\\_Short.doc](http://www.oft.osd.mil/initiatives/srl/S&RL_Concept_Short.doc)>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *Operation Desert Storm: Lack of Accountability Over Materiel During Redeployment*, Washington, D.C.: U.S. General Accounting Office, 23 September 1992. Available from <<http://161.203.16.4/d35t11/147771.pdf>>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom*, Washington, D.C.: U.S. General Accounting Office, 18 December 2003. Available from <<http://www.gao.gov/new.items/d04305r.pdf>>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *Prepositioning: Observations on Army and Marine Corps Programs during Operation Iraqi Freedom and Beyond*, Washington, D.C.: U.S. General Accounting Office, 24 March 2004. Available from <<http://www.gao.gov/highlights/d04562high.pdf>>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *Military Operations: DOD's Extensive Use of Logistics Support Contracts Requires Strengthened Oversight*, Washington, D.C.: U.S. General Accounting Office, July 2004. Available from <<http://www.gao.gov/highlights/d04854high.pdf>>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *Future Years Defense Program: Actions needed to Improve Transparency of DOD's Projected Resource Needs*, Washington, D.C.: U.S. General Accounting Office, May 2004. Available from <<http://www.gao.gov/highlights/d04514high.pdf>>. Internet. Accessed 6 February 2005.
- U.S. General Accounting Office. *DOD Management: Examples of Inefficient and Ineffective Business Processes*, Washington, D.C.: U.S. General Accounting Office, 25 June 2002. Available from <<http://www.gao.gov/new.items/d02873t.pdf>>. Internet. Accessed 6 February 2005.
- U.S. Joint Chiefs of Staff. "Joint Defense Capabilities Study: Final Report," Washington, D.C.: U.S. Joint Chiefs of Staff, December 2003.
- U.S. Joint Chiefs of Staff. *Joint Warfare of the Armed Forces of the United States*, Joint Pub 1. Washington, D.C.: U.S. Joint Chiefs of Staff, 14 November 2000. Available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp1.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp1.pdf)>. Internet. Accessed 6 February 2005.

- U.S. Joint Chiefs of Staff. *Joint Doctrine for Global Distribution*, Joint Publication 4-09. Washington, D.C.: U.S. Joint Chiefs of Staff, 14 December 2001. Available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp4-09.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp4-09.pdf)>. Internet. Accessed 6 February 2005.
- U.S. Joint Chiefs of Staff. *Joint Doctrine for Logistics Support of Multinational Operations*, Joint Pub 4-08. Washington, D.C.: U.S. Joint Chiefs of Staff, 25 September 2002. Available from <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp4-08.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp4-08.pdf)>. Internet. Accessed 6 February 2005.
- Walker, David M. "Defense Transformation: A Battle The U.S. Cannot Afford To Lose," *National Defense*, September 2004.
- West, Bing, and Major General (Ret) Ray L. Smith. *The March Up: Taking Baghdad with the 1<sup>st</sup> Marine Division*. New York: Bantam Books, 2003.
- Woodgerd, Michael. "Mobilus Initiative: Airships as a New Aerospace Industry Segment," *Transformation Trends*, 22 July 2004. Available from <[http://www.oft.osd.mil/library/library\\_files/trends\\_371\\_Transformation%20Trends-22%20July%202004%20Issue.pdf](http://www.oft.osd.mil/library/library_files/trends_371_Transformation%20Trends-22%20July%202004%20Issue.pdf)>. Internet. Accessed 6 February 2005.